# Spa Owner's Manual

FOR

SPORTUB™

**NOTE: Important Safety Instructions. Please read and follow all instructions before installing, operating or enjoying your spa.**
**Please refer to the operational video that is supplied with spa.**

**Save these instructions for future reference.**

UNDERWRITER'S LABORATORIES

HYDROQUIP

Spasearch APPROVED

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# A Brief History of Spas

During the 5th century B.C., the mineral springs in Greece and the Aegean Islands served as healing clinics. At one particular clinic on the Island of Cos, a Greek physician Hypocrites practiced medicine while writing extensively on hydrotherapy.

In the province of Leige, Belgium mineral springs were favored for centuries by notables and royalty, including Russian Czar Peter the Great and German Kaiser William II. Mineral springs in those days were very similar to today's spas in that both were used for therapeutic and recreation purposes.

The ancient Romans, after a day of conquering the world, retreated to the pleasures of their mineral springs. In fact, many well-preserved mineral springs built by the ancient Romans still exist today in places as far off as Bath, England and Tiberias, Israel. After the fall of the Roman Empire in the 5th century A.D., the number of mineral springs decreased. It was not until the renaissance, mysteriously enough that they again became popular. This raises an interesting question: *Does the use of mineral springs or spas result in great thinking, or do great thinkers resort to the use of mineral springs or spas?*

Your new SPORTUB™ is the modern machine for today's great thinkers and athletes of any age. The spa blends many advanced features to help you enjoy the complete benefits of heated, moving and filtered water for therapy and relaxation. Baja Products, Ltd. is the originator of the acrylic spa, and has built world class products since 1969. We wish you years of enjoyment and relaxation with your new Baja spa. Please take a few minutes to read the valuable safety instructions and operating features described in this manual.

# DIRECTORY


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Date _____Model #_____

Serial Number

# SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

1. **READ AND FOLLOW ALL INSTRUCTIONS.**

2. **WARNING** - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

3. A wire connector is provided on this unit to connect a minimum No. 8 AWG (8.4 $mm^{2)}$ solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5 m) of the unit.

4. **For Cord-Connected/Convertible Units**
a) Replace damaged cord immediately.
b) Do not bury cord.
c) Connect to a grounded, grounding type receptacle only.
d) **NEVER use an Extension Cord of any type.**

5. If the supplied cord and plug are not used, the electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with section 422-20 of the National Electrical Code, ANSI/NFPA 70. The disconnecting means must be readily accessible to the spa occupant but installed at least 5 ft. (1.5 m) from spa water. (See GFCI Warning pg. 4)

6. **DANGER - Risk of Accidental Drowning.** Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children do not use this spa unless they are supervised at all times.

7. **DANGER - Risk of Injury.** The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible.

Never operate spa if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.

8. **DANGER - Risk of Electric Shock.** Install at least 5 feet (1.5 m) from all metal surfaces. As an alternative, a spa may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a minimum No. 8 AWG (8.4 $mm^{2}$) solid copper conductor to the bonding lugs on the control box that is provided for this purpose.

9. **DANGER - Risk of Electric Shock.** Do not permit any electric appliance, such as a light, telephone, radio, or television, within 5 feet (1.5 m) of a spa.

10. Always enter and exit the spa slowly and cautiously. Wet surfaces can be slippery.

11. Do not use the spa alone.

12. People with infections, skin sores or open wounds should not use the spa.

13. It is recommended that people shower before and after using the spa in order to keep spa operating cleaner, and to rinse off spa water chemicals.

14. Disconnect all electrical power before attempting any kind of service to the electrical module.

15. Always use unbreakable containers around the spa. Never use glass.

# SAFETY INSTRUCTIONS

16. Never walk, climb, play or jump on the insulated cover of your spa. Never use the spa unless the cover has been completely removed. Do not rely on the cover as a safety cover For children. Children must be supervised when they are in or around the spa.

17. A fence around your spa with a self-closing and self-latching gate can be the best protection against unauthorized use. If your spa is indoors, lock the door to the room to keep out unauthorized users.

18. Install to provide drainage of compartment with electrical components.

19. **WARNING - To reduce the risk of injury:**

a) The water in a spa should never exceed 40°C(104°F). Water temperature between 38°C (100°F) and 40°C(104°F) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.

b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 38°C(100°F).

c) Before entering a spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices varies.

d) The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.

e) Persons using medication should consult a physician before using a spa since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.

f) Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa.

g) Should nausea, dizziness or headaches occur, leave the spa immediately. Cool the body by taking a cool shower or apply cold towels or ice packs. Seek medical attention if the symptoms persists.

20. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 °F. The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness and fainting. The effects of hyperthermia include (1) failure to perceive heat, (2) failure to recognize the need to exit spa, (3) physical inability to exit spa, (4) fetal damage in pregnant women, (5) unawareness of impending hazard, (6) unconsciousness resulting in the danger of drowning. **WARNING: The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia.**

21. Inform all occasional users of these precautions.

22. **For units with an Integral GFCI (ST 1050-54-56-59): Warning** - This product is provided with a ground fault circuit-interrupter at the end of the cord. The GFCI must be tested before each use with the product operating. Push the test button on the GFCI and the product should not operate. Push the reset button on the GFCI and the product should operate normally. If the product fails to operate in this manner, there is a ground current flowing indicating the possibility of an electrical shock. Disconnect the power until the fault has been identified and corrected.

# SAFETY INSTRUCTIONS

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23. For units for use in other than single- family dwellings, a clearly labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least 5 feet (1.52 m) away, adjacent to, and within sight of the unit.

24. **SAVE THESE INSTRUCTIONS!**

# INSTALLATION GUIDELINES

1. Locate your spa on a solid, level surface that is structurally strong enough to support its filled weight.

2. Installations on wooden decks or balconies should be checked to insure that the floor can support the weight of the full spa and the persons using it.

3. A reinforced poured concrete slab (min. 4" thick) is recommended. However, wood decking is also acceptable, provided it is constructed so that it meets the requirements outlined above. (see No. 2)

4. The spa must be installed in such a manner as to provide drainage away from the spa.

5. Spas which will be installed into a floor or wood deck must be installed to permit access to the equipment for servicing.

6. Do not install the spa under any electrical wires.

7. In selecting the ideal outdoor, or indoor location for your spa, we suggest you take into consideration the following:

a) The view you will have from the spa.
b) The proximity to your home for changing and/or shelter (this is very important in cold weather).
c) A sheltered environment, providing protection from wind and weather if needed.
d) The overall enhancement of your yard or room.
e) Do not place the spa under a unguttered roof overhang.
f) Indoor installations require provisions for proper ventilation.
g) Check local codes for building and fence requirements.
h) Water is carried and splashed out by the user, be sure the spa is not located in an area or on a surface that may be damaged by water. (Examples: Carpeting, 2nd floor in house, etc.)
i) Indoor spas should be installed in rooms constructed of materials that will not be damaged by high humidity.

# 120 VOLT OZONE GENERATOR

## 120 VOLT OZONE GENERATOR INSTALLATION (optional)

The Sportub series are equipped with an ozone feed line ready for the addition of optional ozone generator.

Located under the spa lip and above the equipment pack please find the coiled ozone feed line with built in check valve. Connect this line to the barb fitting provided on the ozone generator leaving the excess tubing coiled under lip. This line is connected to a dedicated ozone injection spa jet.

The yellow 4-prong plug located on the equipment pack supplies power to the ozonator. Make sure the electrical pin configuration is matching and then plug in the ozonator. This receptacle is **ON** (hot) at all times. Ozone will be injected into spa automatically whenever the pump is operating on **low speed mode** (Filtration) or High Speed.

WE RECOMMEND THAT YOU FOLLOW ALL INSTRUCTIONS PROVIDED BY THE OZONE GENERATOR MANUFACTURER.

# ELECTRICAL

## 120 VOLT INSTALLATION

The provided power supply cord must be connected to a receptacle with a minimum circuit breaker size of 15 amperes. No other electrical appliance or fixture should be used on this circuit.

The heater will provide 1100 watts (1.1 kw) of heat when the pump is operating in low speed and thermostat is calling for heat.

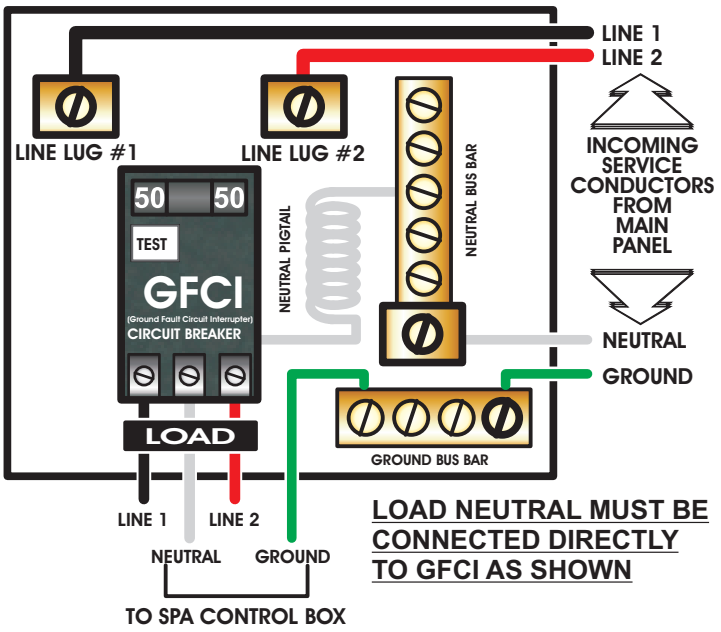
**Under no circumstances should an extension cord be used. Use of an extension cord will seriously degrade the performance of the equipment module and can create an electrical hazard.**

# GROUND FAULT INTERRUPTER

## Ground-Fault Circuit-Interrupters and Load Neutral Connection

Most 240 volt panel mounted Ground-Fault Circuit-Interrupter's (GFCI's) are provided with a "LINE" neutral connection lead. Since the GFCI itself is a 120 volt device, this wire must be connected to the neutral buss bar in order for the GFCI to function properly.

Many GFCI's are also provided with a "LOAD" neutral connection terminal. The purpose of the "LOAD" neutral connection terminal is to allow the connection of 120 volt devices to the 240 volt GFCI. If the circuit being connected does not contain any 120 volt devices, the LOAD neutral connection is not used, and the GFCI will provide protection of all 240 volt devices connected. A "LOAD" neutral terminal connection is NOT needed in order for the GFCI to function.

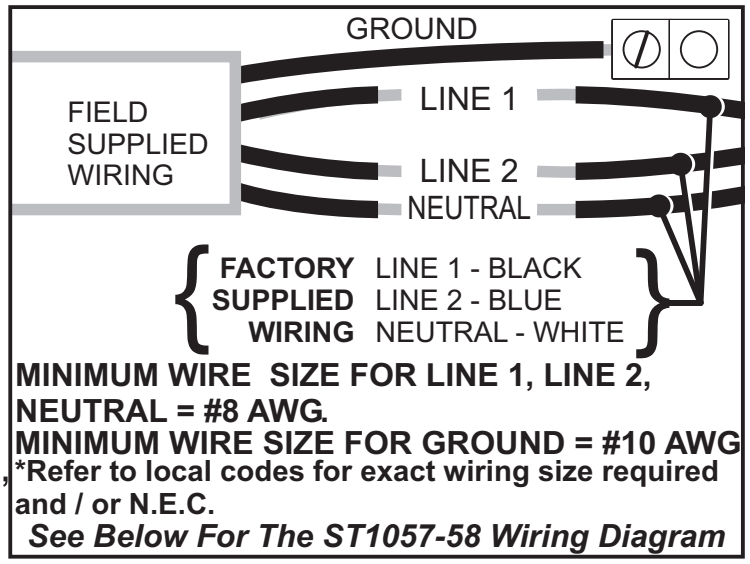


# ELECTRICAL

**The following instructions are for 240 Volt - 40 Amperes Applications**

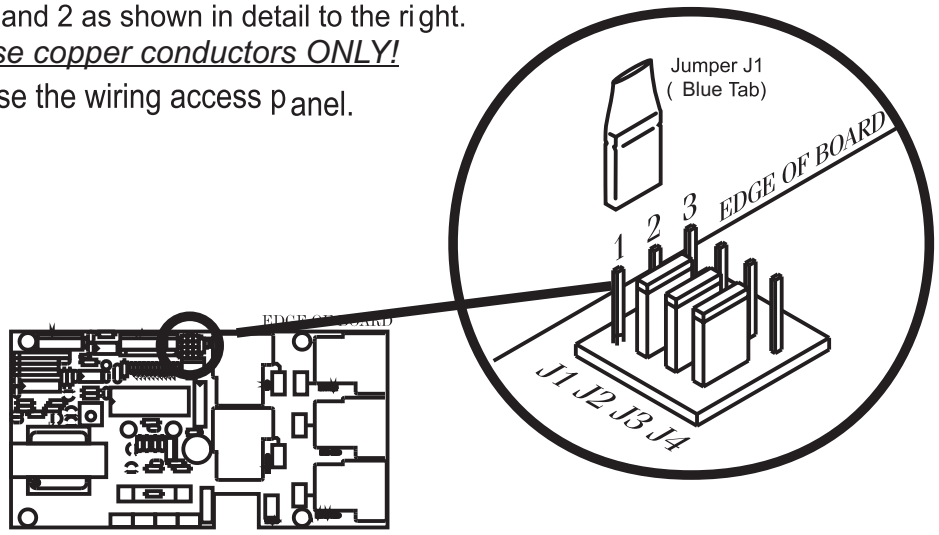
## 240 VOLT INSTALLATION

The heater will provide 4500 watts (4.5kw) of heat when the pump is on and the thermostat is calling for heat.
The following instructions must be followed for a permanently connected Equipment Module designed to operate at 240 Volts.




**MINIMUM WIRE SIZE FOR LINE 1, LINE 2, NEUTRAL = #8 AWG.**
**MINIMUM WIRE SIZE FOR GROUND = #10 AWG**
***Refer to local codes for exact wiring size required and / or N.E.C.**
***See Below For The ST1057-58 Wiring Diagram***

1. Disconnect and remove the GFCI power cord.
2. Connect input power wiring as shown above. When connected to 240 Volts, the Equipment Module requires a three wire electrical service, **plus ground (line 1, line 2, Neutral and Ground),** and requires a minimum supply conductor ampacity of 40 amperes and a GFCI circuit breaker size of 40 Amperes.
3. Move Jumper 1 (Blue Tab) from pins 2 and 3 to pins 1 and 2 as shown in detail to the right.
   *Use copper conductors ONLY!*
4. Close the wiring access panel.




**J1= Conversion Jumper**

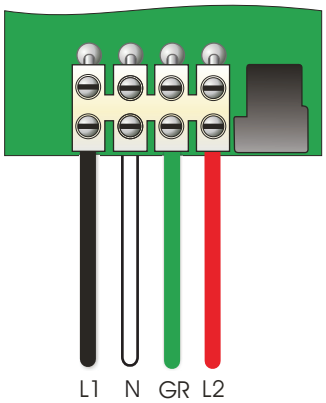
**Across Pins 1 and 2 for 240 Volt Operation**

**Across Pins 2 and 3 for 120 Volt Operation**

**NOTE: 240 Volt mode allows pump high speed and heater to operate at the same time.**

# SPORTUB 1057-58 WIRING DIAGRAM

## 240 VOLT - 50 AMP




**IMPORTANT:** Always refer to the product data label (Located on top of Control Box) for specific electrical information.

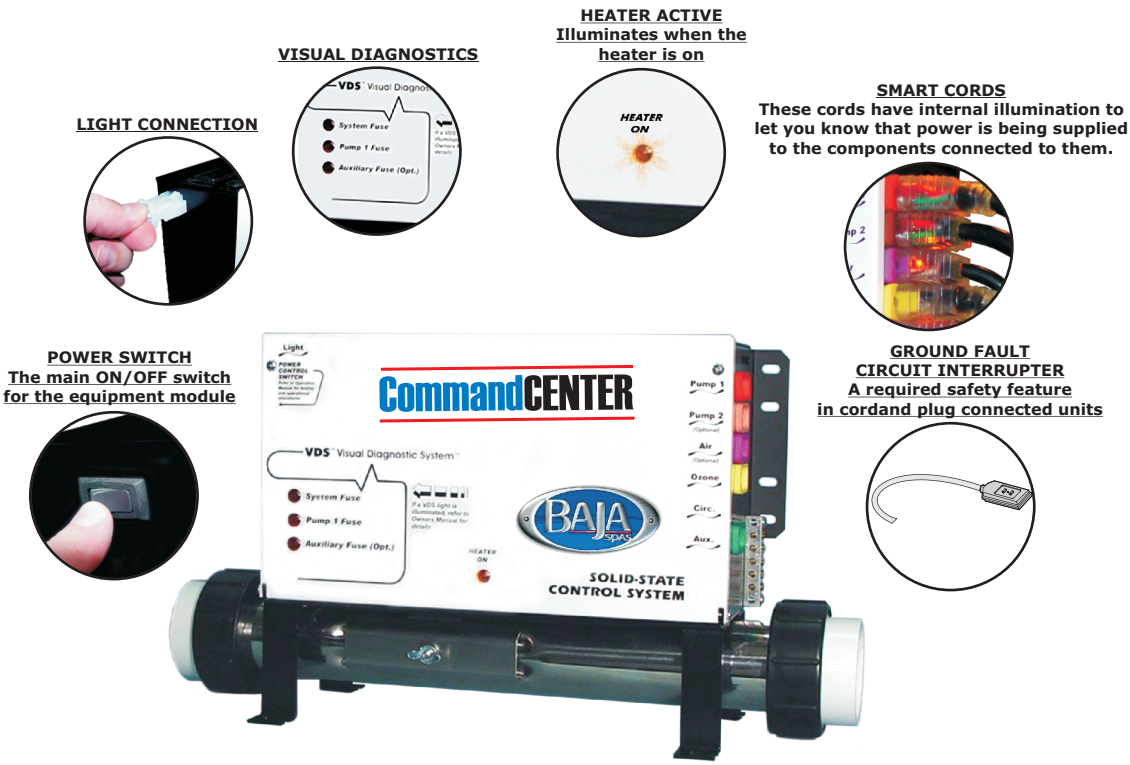
*Line 1, Line 2, Neutral and Ground. 8AWG. Minimum 240-Volt electrical service required:*

# EQUIPMENT FEATURES
## ST 1050-54-56-59

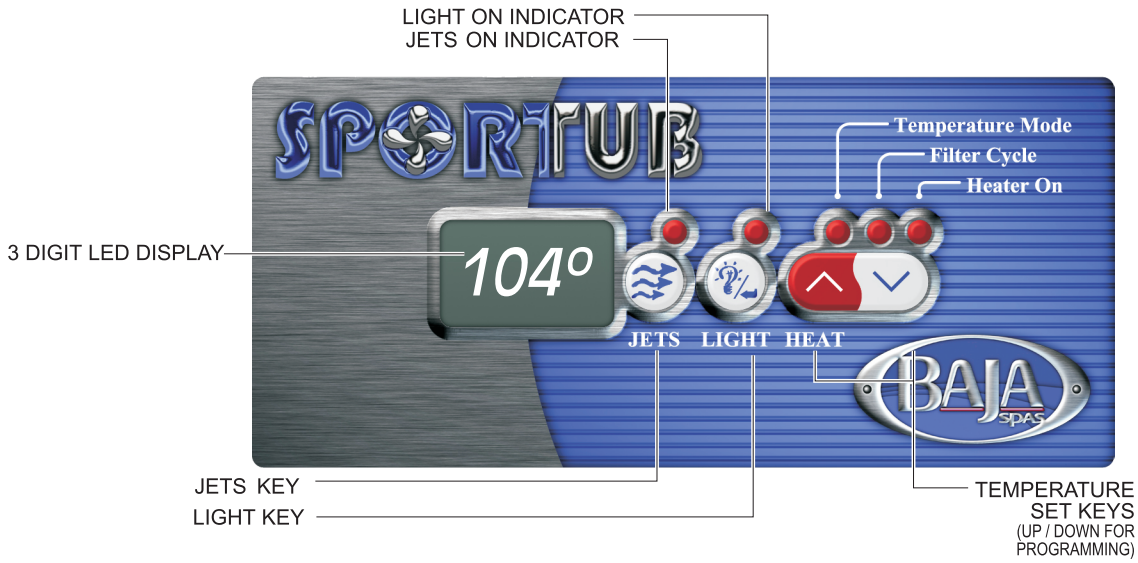
NOTE: Before filling spa, please familiarize yourself with the features of the Equipment Module & Control

# EQUIPMENT MODULE

Your system is equipped with Hydro-Quip's exclusive, Visual Diagnostic System, your control will do the troubleshooting for you. VDS consist of control-mounted indicators and (if equipped) HydroQuip Smart Cords. You will know at a glance if a component is being supplied with the proper voltage, if a fuse has blown or (by simply pressing a switch) if the complete system is being supplied with voltage from the breaker panel. In addition, your Baja Spa is equipped with exclusive "Smart Cords". These cords have internal illumination to let you know that power is being supplied to the components connected to them. This is a helpful troubleshooting feature should a problem with a component arise.


LIGHT CONNECTION
VISUAL DIAGNOSTICS
HEATER ACTIVE
Illuminates when the heater is on
SMART CORDS
These cords have internal illumination to let you know that power is being supplied to the components connected to them.
POWER SWITCH
The main ON/OFF switch for the equipment module
GROUND FAULT CIRCUIT INTERRUPTER
A required safety feature in cordand plug connected units
CommandCENTER
VDS Visual Diagnostic System
System Fuse
Pump 1 Fuse
Auxiliary Fuse (Opt.)
HEATER ON
BAJA SPAS
SOLID-STATE CONTROL SYSTEM

# SPA CONTROL PANEL



# INITIAL STARTUP

## WARNING

**IN ORDER TO CHECK FOR POSSIBLE LEAKS, THE FOLLOWING STEPS ARE PERFORMED WITHOUT THE EON CABINET IN PLACE. TO PREVENT RISK OF ELECTRICAL SHOCK, DO NOT USE SPA AT THIS TIME.**

1. 120 Volt Units: Make sure the power supply cord is "unplugged". 240 Volt Units: Make sure the power supply is "OFF".

2. Check to see that the Drain Valve (located to the left side of Equipment Module) is closed.

3. The slide valves on each side of the Equipment Module should be open.
(The valve is open when the handle is pulled out, closed when it is pushed in).

NOTE: Valves snap lock into place in both "open" and "closed" positions.

4. Fill the spa water to 1" above the center line of the skimmer located inside spa. Bleed air from the filter and equipment module by opening the air relief plug (located on the top of the filter). Tighten plug when finished. (See pg. 11 Cleaning the Filter)

IMPORTANT NOTE: The Equipment Module must never be operated without water in the spa, or serious damage to the heater and/or pump could result.

5. Check all plumbing connections for water leaks.

6. Familiarize yourself with controller operations (Pages 9).

7. Apply power to the Equipment Module:
120 Volt Units: Plug cord into dedicated 15 amp outlet.
240 Volt Units: Turn the main disconnect switch to the "ON" position.

8. Push the JET button located on the topside SPORTUB™ control panel. The pump will now operate at high speed.

9. Set desired temperature.

IMPORTANT NOTE: It is very important the pump be operated on high speed for several minutes to assure that all air has been removed from system. The thermostat may only be "turned up" after full water flow has been established.

10. Check for any leaks.

11. Open valves for operation. Close valves for maintenance.

## FOR YOUR INFO

**If your new spa pump does not prime (flow) on the initial start-up...
You may be experiencing "air lock"**

This normal occurrence can be easily corrected by loosening the plumbing union on the left side of the pump's suction (your left as you face the equipment) until the water flows into the pump. Then quickly re-tighten fitting taking care that the O-ring stays in place. Turn on the LOW SPEED pump setting and you should now have normal flow through the jets.

**Note: OPEN AIR RELIEF VALVE on the top of the filter when filling spa.**

# SPORTUB Controller Operations

**JETS KEY**: The Jets key is used to turn the pump on or off at selected speeds. The first press will turn on the pump LOW speed, the second press will change the pump to HIGH speed, the third press will turn the pump off or return to a heat or filtration mode (see note). A built-in timer will shut the pump off 20 minutes after it has been started unless the user does so manually. When the pump is on, the Jets On Indicator will appear above the Jets key. **NOTE**: You may not be able to turn the pump off if it has started a filtration cycle or if the spa is calling for additional heating. This is easily identified by observing the status of the "Heater On Indicator" or the "Filter Cycle Indicator". **(Models ST 1050,54,56,59)**

**LIGHT KEY**: The Light key is used to turn the light on or off. The first press of the Light key will turn the light on. A second press will turn the light off. The light will automatically turn itself off after 2 hours. When the light is on, the Light On Indicator will appear above the Light key.

**Important Note ST Models 1057-58:**
**Do not program filter cycles or duration on ST Models 1057-58. These spas are designed with a circulation pump to operate filtration mode 24 per day. Leave in the factory set filtration mode of 1 cycle for 60 minutes daily. This Filtration time operates the low speed Jet Pump for purge only cycle.**

**Programming Filter Cycles:** You may choose to filter the spa 1, 2 or 3 times per day as required to keep the water clean and sanitary. Press the Jets Key for 5 seconds. The current setting will be displayed. Use the Up & Down Arrow keys to increase or decrease the frequency of the filtration cycles per day. The filter cycle is now set. To start a filter cycle immediately, press the Jets key. The cycles will repeat every 8, 12 or 24 hours within a 24-hour period **starting from the time programmed**. It is recommended to schedule the filtration cycles so they do not interfere with sleeping hours.

**Programming Filter Cycle Duration:** You may choose to filter your spa 60, 120 or 180, 480 minutes per cycle as required to keep the water clean and sanitary. Press the Light Key for 5 seconds. The current duration of the filter cycle will be displayed. Use the Up & Down Arrow keys to increase or decrease the duration of the filter cycle. The duration is now set. To start a filter cycle immediately, press the Light key.

**Setting Fahrenheit and Celsius Degrees:** Press and hold the light key for 5-seconds, the display will change to either setting. When the desired display is shown the display has been set and nothing else must be done.

*** If the spa is being used during the filter cycle, the cycle will be suspended for a period of 40-minutes or until the spa is no longer in use.**

**TEMPERATURE PROGRAM KEYS**: The Up/Down Temperature Program keys are used to set the desired water temperature. Press the Up or Down keys to Increase (or decrease) the desired temperature setting. The temperature can be adjusted in 1ºF increments from 59ºF to 104ºF (or 15ºC to 40º C). The desired temperature setting will remain in the display for 5 seconds as confirmation of the new value, after 5 seconds the display will return to display the present water temperature. **NOTE**: The Temperature Program Indicator will appear to indicate that the temperature in the display is the desired-programmed temperature and not the actual water temperature. **(Models ST 1050,54,56,59)**

**HEATER OPERATION**: When the water temperature drops 1ºF lower than the desired temperature, the heater will be turned on until the water temperature reaches the desired temperature plus 1ºF. The Heater On Indicator will appear on the function panel when it is on. The Heater On Light Indicator will blink on the function panel whenever there is a call for heat and the heater has not yet been activated.

**FREEZE PROTECTION**: When the system senses cold temperatures, it will automatically engage the freeze protection mode for a monitoring period of 24 hours. During this time, the pump will operate for 1 minute every 2 hours to circulate warm water through the plumbing. When the pump is running due to this feature, the Filter Cycle Indicator on the spaside panel will blink. Filter Cycles will operate as determined by the programing and will not be affected by the Freeze Protection Mode.

**HIGH TEMPERATURE PROTECTION**: If the water temperature exceeds 112ºF at the High Temperature probe, the system will display the message HL and will turn the heater off. After the water temperature has cooled down, pressing any key on the spaside panel control will allow the system to restart. If the spa water temperature does not seem to be elevated, the HL reading may have been caused by poor water flow or electrical line interference (e.g. thunderstorms, voltage surges, etc.). Simply reset and monitor the system. See Troubleshooting, page 15.
**NOTE**: The Freeze Protection Circuit is in effect at all times that there is power applied to the system and will automatically engage if needed.

**DEFAULT SYSTEM OPERATIONS**: When power is applied, or there is a temporary loss of power, the system will initiate it's default programming. The filter cycle starts 24 hours after the system has been powered up, filters for one hour, and then repeats every 24 hours. The maintained temperature will default to 100º F. The freeze protection feature will stay in effect. If a power loss condition is experienced, the spaside display will blink until any key is pressed. This feature is to let the user know that a power failure has occurred and that the Temperature Program point has returned to the default value.

**IMPORTANT PROGRAMMING NOTES**: (1) If a program change is not made within 5 seconds, the system will default back to the monitoring mode. (2) While programming, the Pump and Light features may have been activated. Either can be turned off in the normal way after programming is complete. The display will return to indicate water temperature 5 seconds after the keys are released.**Note:** A power outage to the system will erase any programmed settings. If a power outage should occur, it will then be necessary to re-program the system. **Filtering default is 120 minutes, twice a day. Temperature default is 100° degrees.**

# QUICK PROGRAMMING NOTES

**IF YOU APPLY POWER TO SYSTEM AND DO NOTHING ELSE:**

1. The primary filter cycle will occur in 24 hours and run for 120 min. This will repeat every 12 hours.
2. The spa will heat up to and maintain 100º F. (The freeze protection mode is available if required.)

**TO SET OR CHANGE THE FILTER CYCLE START TIMES:**

Refer to **PROGRAMMING FILTER CYCLES** in operating manual.

**IF THE FILTER CYCLES ARE NOT RUNNING AT THE BEST TIMES FOR YOUR SLEEPING SCHEDULE, YOU MUST PROGRAM THE SYSTEM AT A PARTICULAR TIME OF DAY TO ADJUST THE INTERNAL SYSTEM TIME PATTERN.**

| Desired Filter Cycles | Programming Time | Filtering Time |
|---|---|---|
| 1 Cycle per 24 Hour Period | 8:00 PM | 8:00 PM |
| 2 Cycles per 24 Hour Period | 8:00 PM | 8:00 PM & 8:00 AM |
| 3 Cycles per 24 hour Period | 2:00 PM | 10:00 PM, 6:00 AM & 2:00 PM |

Note: The easiest way to change the internal system time pattern is to simply TURN OFF ALL POWER to the spa for (10) ten seconds and then promptly start your programming procedure.

# BAJA EXTREME SOUND PRECAUTIONS

**These instructions are for spas equipped with the optional Baja Extreme Sound System feature (Optional on the ST1057). "Caution-Risk of electrical shock. Do not leave compartment door open". Replace components only with identical components.**

**1.** Baja Extreme Sound System controls should not be operated while inside the spa.

**2.** "WARNING- Prevent Electrocution. Do not connect any auxiliary components (for example speakers, headphones, additional audio/video components etc.)to the system.

**3.** These units are not provided with an outdoor antennae. If provided, it should be installed in accordance with Article 810 of the National Electrical Code.

**4.** Do not service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**5.** If the power supply connections or power supply cord(s) are damaged, water is entering the audio/video compartment, or any electrical equipment compartment area, the protective shields or barriers are showing signs of deterioration, or there are signs of other potentially hazardous damage to the unit, turn off the unit and contact a qualified service technician.

**6.** The unit should be subjected to periodic routine maintenance once every quarter to make sure the unit is operating properly.

# INSTALLING YOUR PURIFICATION DISPENSER

There are several ways that the water chemistry can been maintained in your Baja Spas. As the photos indicate below, Baja's built in KLEEN H20 dispenser incorporates the filter lid for either chlorine / bromine tablets or Nature 2 purification system. The Nature 2 purification system, is only recommended for personal use or family spa installation. Chlorine/Bromine or similar is recommended for regular and heavy bather installation. It is very important to maintain proper PH levels between 7.2 - 7.6.

**CAUTION:**
**ALWAYS CONSULT YOUR DEALER FOR RECOMMENDATION AND MAINTENANCE DETAILS.**
**CONSULT YOUR NATURE2 OWNER'S MANUAL BEFORE INSTALLING PURIFICATION SYSTEM.**

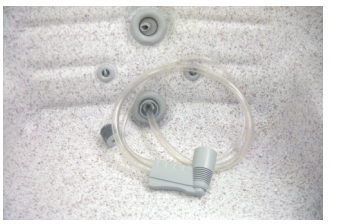
**<u>Nature 2:</u> Insert Cartridge Replace every 4 months**

# JET & FILTER OPERATION

## JET OPERATION:

Open air control fittings when in HIGH speed Jets mode.

Turn outer ring to direct flow from TurboStream® to Magna Jets. Each TurboStream® jet controls bucket seat jets.



To install (optional) Euro'ssage™, turn Magna Jet counterclockwise and pull straight out then turn Euro'ssage™ slightly clockwise until you feel it click into place.

## FILTER REMOVAL & CLEANING:

Your Baja Spa comes complete with a 50 Sq. Ft. filter cartridge that is designed to work under pressure. With normal use, this filter should be removed a minimum of once every 30 days, or anytime you notice an appreciable decrease of the flow from the spa jets. You should take time to clean the filter.

**TO CLEAN THE FILTER:**

1. TURN OFF THE POWER.
2. REMOVE THE COVER FROM THE FILTER UNIT.
3. OPEN AIR RELIEF PLUG.
4. PULL TAB AND TURN LOCK RING COUNTERCLOCKWISE (LEFT).
5. REMOVE CARTRIDGE FROM THE FILTER HOUSING AND CLEAN THOROUGHLY WITH THE PRESSURE SPRAY NOZZLE FROM A GARDEN HOSE.
6. REPLACE THE CLEANED FILTER AND TIGHTEN THE LOCKING RING.
7. TURN ON POWER.
8. WHEN THE WATER COMES OUT OF THE AIR RELIEF PLUG, CLOSE IT.
9. WHEN WATER IS FLOWING FULL, SET THERMOSTAT TO DESIRED WATER TEMPERATURE.

# SPA CABINET INSTRUCTIONS

① Position corner posts with corner panel under each Corner.

② Install corner posts to side panels using panel bolts and bolt driver. Attach side panels to corners using bolts & bolt driver.

③ Completed Baja spa.

NOTE: (1050) Install corner posts to end panels (2). Attach side panels (2) to complete.

# CABINET DRAIN INSTALLATION

**INSTALLATION INSTRUCTIONS FOR CABINET DRAIN VALVE BAJA SPA'S EQUIPPED WITH THE THRU CABINET DRAIN VALVE WILL INCLUDE:**

- Cabinet panel with removable 1 ½" black plug .
- Place this panel in the LEFT CORNER position on models # 1054/57/58/59 and in LEFT SIDE panel position on Models # 1050/56.
- Black drain valve located to the left of the equipment pack, attached to clear hose with a ¾ hose clamp.

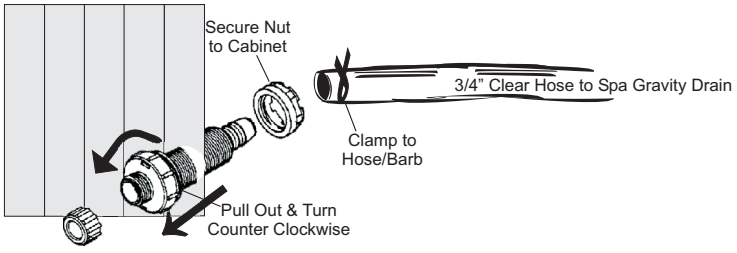
**PLEASE FOLLOW THESE INSTALLATION INSTRUCTIONS, PRIOR TO SKIRT ASSEMBLY AND FILLING THE SPA WITH WATER:**

- Remove / slide clamp with pliers and take out drain valve from clear hose.
- Discard black cabinet plug and install drain thru hole and secure back nut.
- Place panel in place, making sure there are no crimps in line.
- Secure valve to cabinet.
- Re-attach clear hose completely over barbs and re-secure with clamp.
- Complete cabinet installation.

**TO DRAIN SPA- MAKE SURE EQUIPMENT IS IN OFF POSITION**

- Simply remove the drain cap.
- Attach a garden hose to threads.
- Turn front face counter-clockwise and pull outwards.

There should be a slow but steady flow of water which originates from the gravity drain located in bottom of the Baja spa.



# SPA MAINTENANCE SCHEDULE

| | |
|---|---|
| **DAILY** | - CHECK WATER LEVEL, REFILL IF NECESSARY TO LINE ON SKIMMER PLATE.<br>- CHECK CHEMICAL READING AND ADJUST AS NEEDED.<br>- FOR PROPER FILTRATION, THE WATER SHOULD BE CIRCULATING FOR AT LEAST FOUR HOURS A DAY. |
| **WEEKLY** | - WIPE DOWN THE WATER LINE.<br>- CHECK WATER FLOW AND CLEAN FILTER IF NECESSARY. |
| **MONTHLY** | - CLEAN FILTER CARTRIDGE.<br>- CLEAN THE INSULATED SPA COVER.<br>- TEST THE GFCI. |
| **THREE MONTHS** | - DRAIN THE SPA COMPLETELY, REFILL WITH WATER AND REPLENISH CHEMICALS.<br>- WHILE THE SPA IS EMPTY, CLEAN WITH A NONABRASIVE ACRYLIC CLEANER AND RINSE.<br>**NOTE:** NEVER WAX THE SURFACE AS THE WATER WILL DISSOLVE THE WAX AND CLOG THE FILTER. |
| **SIX MONTHS:** | - CLEAN EON SYNTHETIC CABINET WITH WET TOWEL. |

# REGULAR SPA MAINTENANCE

**DRAINING THE SPA (SEE PAGE 12):**
It is recommended to completely drain the spa at least four times a year. More frequent draining may be required depending on usage. The spa should also be drained if it is not going to be used for a long period.

An empty spa MUST be covered. Direct sunlight on the acrylic surface can cause severe damage or blemishing of the acrylic spa surface, and can result in the voiding of the spa surface warranty.

**TO DRAIN THE SPA (SEE PAGE 12), COMPLETE THE FOLLOWING STEPS:**
1. Turn off the main circuit breaker or disconnect panel.
2. Attach a garden hose to the drain hose bib, and then open hose bib allowing the water to drain from the spa by gravity. For complete draining, place outlet end of hose below bottom of spa.

**CLEANING**:
When the acrylic surface becomes soiled, it can be cleaned with a soft cloth or sponge. **DO NOT USE ANY ABRASIVE CLEANERS**, as they can scratch or dull the brilliant acrylic surface.

Your insulated cover can be cleaned with a non-abrasive household cleaner. A non-silicone based vinyl restorer will help protect the surface from sun damage.

# WINTERIZING/ SUMMERIZING YOUR SPA

If the spa is to be left unused for an extended period of time in areas where freezing temperatures DO NOT OCCUR, it may be desirable to turn the heater OFF. To keep the spa water clean and sparkling, set the timer to filter the water several times each day. When preparing the spa for use, check the water chemistry to assure correct chlorine and pH levels.

If it is desired to keep water in the spa during the time of year when freezing may occur, the heater will operate as required to prevent the water from freezing.

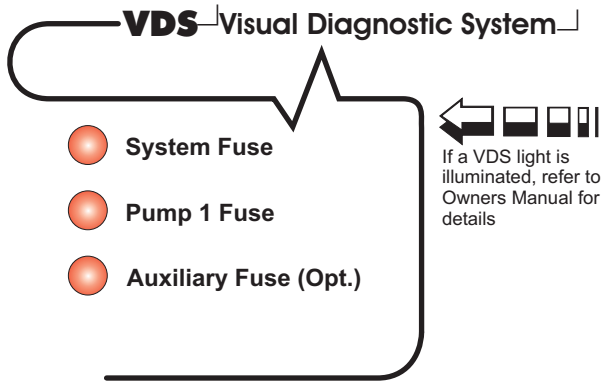
**However, CAUTION MUST BE USED WITH THIS APPROACH. In the event of electrical power interruptions, regardless of cause, the heater and pump will stop operating and freeze protection will be lost. This could result in freeze damage to the spa, spa plumbing/and or Equipment Module components. Such damage is not covered by the Equipment Module Warranty.**

If the spa is to be drained for an extended period of time, consult your local retailer for winterizing your spa completely due to potentially extreme weather conditions.

**Smart Winter Mode:** In cold climate areas, Baja Spas are equipped with sensors to detect cold climate situations. These safety sensors will not operate in a power outage. If long outages are expected, it is best to drain and winterize the spa.

# VISUAL DIAGNOSTIC SYSTEM

***If your system is equipped with the Visual Diagnostic System, the control will do the troubleshooting for you! VDS consists of control mounted indicators and (if equipped) exclusive "Smart Cords". You will know at a glance if components are being supplied with proper voltage or if an internal fuse has blown.***


VDS Visual Diagnostic System
System Fuse
Pump 1 Fuse
Auxiliary Fuse (Opt.)
If a VDS light is illuminated, refer to Owners Manual for details

**VDS INDICATOR ILLUMINATED**

| | |
|---|---|
| **SYSTEM FUSE - This fuse protects the printed circuit board.** | Input voltage connected incorrectly.<br>Call your local dealer or qualified technician. |
| **PUMP 1 FUSE - Protects the primary pump.** | Restricted flow of water, faulty pump or severe weather/electrical storm.<br>Call your local dealer or qualified technician. |
| **AUX. FUSE - Protects the secondary pump.** | Restricted flow of water, faulty pump or severe weather/electrical storm.<br>Call your local dealer or qualified technician. |

# TROUBLESHOOTING

## NONE OF THE EQUIPMENT OPERATES

**Main breaker is set at OFF.** Set main breaker to ON.
**Sub-panel breaker is set at OFF.** Set sub-panel breaker to ON.
**Equipment GFCI set at OFF.** Set GFCI to ON.
**Power switch set at OFF (if available).**
Set power switch to ON.
**Components not plugged in.** Plug in components.
**Power cord not plugged in.** Plug in power cord.
**Overheat protection switch tripped.**
Allow unit to cool down and restart by pushing any key.
**Over-Temperature Protection On**

## NO, LOW, OR SURGING WATER FLOW

**Air lock plumbing system**.
"Bleed" the system, see start-up procedure page 8.
**Restricted flow**
Insure that the water shut-off valves are open and that suction fittings are not blocked by debris.
**Dirty filter.** Clean or replace filter.
**Low water level.** Increase water level to recommended level.

## LOW SPEED PUMP DOES NOT OPERATE

**Overheat protection switch tripped.**
Allow unit to cool down and restart by pushing any key.
**Pump not plugged in.** Plug in the pump.
**Low Level Programming Incorrect-** Contact your Dealer

## THERAPY JETS INOPERATIVE

**Overheat protection switch tripped.**
Allow unit to cool down and restart by pushing any key.
**Shut off valves are closed.** Open shut off valves.
**Pump not plugged in.** Plug in the pump.
**Dirty filter.** Clean or replace filter.
**Jets not properly adjusted.**
Adjust jets properly - or contact your local dealer.
**Diverter valve not properly adjusted.**
Adjust diverter valve properly - or contact your local dealer.
**Thermal Overload Tripping.**
Check for restricted flow of water

## LIGHTS INOPERATIVE

**Light bulb defective.**
Replace bulb - or contact your local dealer.
**Reflector fallen off.**
Replace reflector - or contact your local dealer.
**Light not plugged in.** Plug in the light.

IF THE ABOVE TROUBLESHOOTING PROCEDURE DOES NOT CORRECT THE PROBLEM, THEN CONTACT YOUR LOCAL SPA DEALER OR SERVICE TECHNICIAN

## OZONATOR INOPERATIVE

**Power switch is OFF.** Set power switch to ON.
**Power cord not plugged in.** Plug in power cord.
**Low water flow.** Clean or replace filter - or contact your dealer.
**Ozone bulb defective.** Contact your local dealer.

## WATER LEAKS

**Spa overfilled.** Adjust spa water level.
**Too many people in spa.** Adjust spa water level.
**Drain valve left open.** Shut off drain valve.
**Couplings or unions loose.**
Tighten or contact your local dealer.
**Incorrect water chemistry.** Contact your local dealer.
**Pump seal leaking.** Contact your local dealer.
**Plumbing / connections leaking.** Contact your local dealer.
**Water leaking from spa side control.**
Contact your local dealer.

## NO HEAT

**Temperature not set correctly.** Adjust setting.
**Overheat protection switch tripped.**
Allow unit to cool down and restart by pushing any key.
**No power to heater.** Reset breaker at service panel.
**Low water flow.** Clean or replace filter.
**Improper water flow.**
Refer to NO, LOW, OR SURGING WATER FLOW (above).
**Spa cover not installed.** Replace spa cover.
**Current Limiting On**- 120V Systems will not heat if High-Speed is on. Contact your dealer

## LOW HEAT

**Insufficient heat time.**
Increase heating periods on timer operation.
**Temperature not set correctly.** Adjust temperature setting.
**Spa cover not installed.** Replace spa cover.
**Overheat protection circuit tripped.**
Allow unit to cool down and restart by pushing any key.
**Temperature sensor not in drywell.**
Place sensor in drywell - or contact your local dealer.
**Improper water flow.**
Refer to NO, LOW, OR SURGING WATER FLOW (above).

## HIGH HEAT

**Temperature sensor not in drywell.**
Place sensor in drywell - or contact your local dealer.
**Temperature set too high/maximum.**
Adjust temperature setting.
**High air temperature.** Remove spa cover.

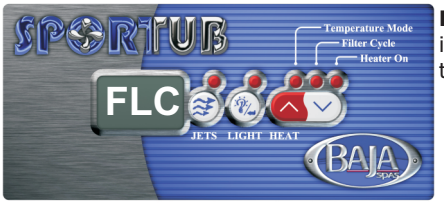
## GFCI TRIPS OCCASIONALLY

**Lightning or Electrical storm, Power surge, Extremely humid conditions, or Radio frequency interference.** Reset GFCI.
*NOTE: Assure that the GFCI is properly grounded and bonded.*

## GFCI TRIPS REPEATEDLY

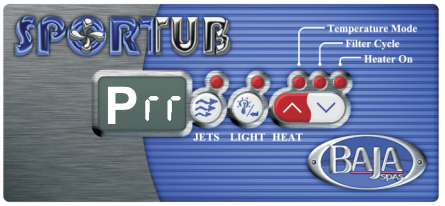
**Defective component.** Contact your local dealer.

# CONTROLLER ERROR INDICATORS

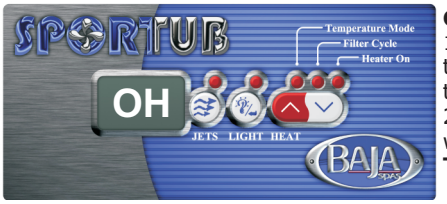



**PRESSURE or FLOW SWITCH <u>ACTIVATED</u> -** This error will be displayed only when the pump is not activated. Cycle the pump through Low & High speeds then off. If the error does not clear, this is an indication that the pressure or flow switch is activated with no water flow.

**PRESSURE or FLOW SWITCH <u>NOT ACTIVATED</u> -** This error will be displayed while the pump is running. Cycle the pump through Low & High speeds. If the error does not clear, this is an indication that the pressure or flow switch has not activated although there is water flow.




**TEMPERATURE SENSOR MALFUNCTION -** This error will occur when a problem with the temperature sensor exists. This error may also occur if the system is activated while the water temperature is below 35°F.




**OVERHEAT or HIGH-LIMIT PROTECTION -** There are three(3) stages of over-temperture:
1 - The spa water has exceeded 112F. The heater, pump and accessory will be deactivated until the water cools to 109°F. Be sure to check the actual water temperature with an accurate thermometer.
2 - The spa water has exceeded 119°F. The heater will deactivate while the pump and accessory will still operate. **WATER MUST BE BELOW 119°F AND POWER MUST BE RESET TO CLEAR THE "HL" ERROR**

A dirty spa filter can also cause a restricted flow of water, be sure the filter is cleaned regularly and ensure all water shutoff valves are open.

If the system has been operating normally until now, the pump may be overheating the spa. Refer to "Programing Filtration" on page 10 and reduce the duration and/or number of cycles per day.

3 - If you've eliminated items 1 & 2 as problems, the high-limit sensor may have malfunctioned.

**FREEZE PROTECTION -** There are two(2) levels of freeze protection integrated into the system.

**1 -** SMART WINTER MODE, this mode will activate any time the temperature falls below 59°F. This mode will be active for a period of 24-hours. In this mode, if a pump has not been activated in the last 2 hours, the system will automatically turn it on for 1-minute to prevent freezing. The "Filter Cycle" indicator will flash while this mode is active.

**2 -** If the spa water temperature drops below 49°F, the heater & pump will be activated until the water temperature reaches 50°F. **While freeze protection is active, no other functions will be possible.**